

IN THE CLAIMS

Please cancel Claims 1 - 15 without prejudice or disclaimer, and add the following new Claims 16 - 30.

--16. (new) Process for treating vulcanized rubber waste, particularly tyres of all sizes and of all types and/or of other worn reinforced-rubber articles, such as boots, inflatable boats, this process comprising:

- coarse cutting of the said waste into fragments, and
- attacking said fragments using a molten pure base,

characterized in that said attacking of the fragments is carried out under temperature conditions causing, in the presence of said attacking base, deconsolidation of the vulcanized rubber waste into deconsolidated solid fragments,

and in that the process furthermore comprises

- separating said molten base from said deconsolidated solid fragments,
- neutralizing the deconsolidated solid fragments, and
- recycling or reutilizing the neutralized, deconsolidated solid fragments.

17. (new) Process according to Claim 16, characterized by the use of molten pure cast NaOH as the attacking liquid.

18. (new) Process according to Claim 16, characterized in that said separation comprises sedimentation of the deconsolidated fragments, separated beforehand from the molten base, in a settling and neutralizing liquid, and, after removal of the settling and neutralizing liquid, recovery of the deconsolidated fragments.

19. (new) Process according to Claim 16, characterized in that it comprises a recycling of the molten pure base.

20. (new) Process according to Claim 17, characterized in that the molten NaOH treatment temperature is at most 400°C, advantageously at most 350°C.

21. (new) Process according to Claim 16, characterized in that the deconsolidated solid fragments comprise metal fragments and fragments made of synthetic material and in that the process furthermore includes sorting between the metallic and synthetic deconsolidated fragments before they are recycled or reutilized.

22. (new) Process according to Claim 16, characterized in that the deconsolidation treatment takes place in a closed reactor, the materials to be treated completely immersed.

23. (new) Process according to Claim 16, characterized in that the neutralization uses dilute acids, preferably phosphoric acid, more advantageously waste from certain phosphoric acid solutions.

24. (new) Plant for implementing the process for treating vulcanized-rubber waste according to Claim 16, characterized in that it forms a completely closed system, with no atmospheric pollution, which comprises:

- a device for melting said pure base;
- a reactor into which said vulcanized-rubber waste, coarsely cut into pieces, and

said molten pure base as attacking medium are introduced, and in which reactor temperature conditions are applied causing deconsolidation of the vulcanized-rubber waste into solid

fragments deconsolidated under the action of the attacking medium;

- a separating device allowing the molten base serving as the attacking medium to be separated from the deconsolidated solid fragments;

- a neutralizing device fed with neutralizing agent from a source of neutralizing agent, in which device the deconsolidated solid fragments are neutralized; and

- a device for sorting the neutralized, deconsolidated solid fragments.

25. (new) Plant according to Claim 24, characterized in that the reactor has closeable inlet and outlet openings, stirring equipment, and in that said separating device comprises a filter if necessary unclogged by a compressed-air device capable of retaining inside the reactor particles greater than 1 mm.

26. (new) Plant according to Claim 24, characterized in that the neutralizing device comprises a tank provided with an inlet communicating with the outlet of the reactor, and with an outlet, the inlet and outlet being closeable, stirring equipment and a filter if necessary unclogged by the compressed-air device in the output line with extension, spraying equipment for facilitating the neutralization via a line.

27. (new) Plant according to Claim 24, characterized in that the neutralizing device comprises a tank for injection of neutralized liquid and for recovery.

28. (new) Plant according to Claim 24, characterized in that the neutralizing device comprises another tank which contains acid waste and is connected to a mixing unit in the line.